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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,301	06/26/2000	Yusuke Tsutsui	81784.0210	3587

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EXAMINER

NGUYEN, HAU-H

ART UNIT PAPER NUMBER

2676

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/604,301

Applicant(s)

TSUTSUI ET AL.

Examiner

Hau H Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 10 recite the limitation "said input digital video data" and "said regions"; claims 8 and 18 recite the limitations "the number of primary colors". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 9-11, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Koyama et al. (U.S. Patent No. 6,597,349).

Referring to claims 1 and 10, as shown in Figs. 2, 14, and 15, Koyama et al. teach a driving circuit for a semiconductor display device, comprising a digital video dividing circuit 1510 for sequentially supplying digital video data into a latch circuit (1) (input-side line

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memory). After the writing of the digital video signals into the LAT1 group is ended, the digital video signals written in the LAT1 group are transmitted all at once to the LAT2 group. As shown in Fig. 15, Koyama et al. teach the output side line memory further comprises a selector circuit (1) 1506, a level shifter circuit 1507, a D/A conversion circuit 1508, and a selector circuit (2) 1509. With reference again to Fig. 14, the output-side line memory has the capability of serially output data held in the latch circuit 2 from S0 to S3, and display as analog data (see col. 5, lines 44-60, and col. 7, lines 7-13).

In regard to claims 2, Koyama et al. teach in the example as shown in Fig. 2, the latch circuit is divided into groups of four bits (pixels), but other number of bits can be implemented (col. 4, lines 61-65).

As for claims 3-4, and 11, as cited above, Koyama et al. teach the latch circuit (1) sequentially holding input digital data based on the source signal line side shift register 201, and transfer in parallel to the latch circuit (2).

In regard to claims 9 and 19, as cited above, data input to the latch circuit serially from a digital video dividing circuit, and transfer in parallel to the latch circuit (2) when the horizontal data line is complete (col. 5, lines 44-60). Thus, it is implied that input digital video signal is input every horizontal scanning period, and parallel data transfer from input-side line memory to output-side line memory is performed during a horizontal blanking period.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al. (U.S. Patent No. 6,597,349).

Referring to claims 5-8, as applied to claim 1 above, Koyama et al. teach all the limitations of claims 5-8, except for the data storage capacities of the input and output line memory correspond to 400 pixels or 512 pixels, and starting the data items from the 400th, 320th, and 256th, and the number of memory portions is the product of the number of regions and the number of primary colors. However, as cited above, Koyama et al. teach the numbers of pixels can be arbitrarily assigned, therefore, it would have been an obvious matter of design choice to modify the size of the line memory and the order of the output-side memory as taught by Koyama et al. corresponding to 400 pixels or 512 pixels, starting the data items from the 400th, 320th, and 256th, and modify the number of memory portions since applicant has not disclosed that having the size of line memory corresponding to 400 or 512 pixels, or starting the data items from the 400th, 320th, and 256th, or the number of memory portions solves any stated problem or is for any particular purpose because the size of line memory will vary based on the amount of data being processed or displayed, and it appears that any memory size and any order of input data items would perform equally well.

8. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al. (U.S. Patent No. 6,597,349) in view of Asada (U.S. Patent No. 6,020,871).

Referring to claims 12-14, 16, as cited above, Koyama et al. teach all the limitations of claims 12-14, except that the output-side line memory further includes a shift direction for switching the data output in forward or reverse direction.

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However, Asada teaches a bi-directional scanning circuit applicable when a plurality of IC chips are connected in cascade. As shown in Figs. 1 and 10, the direction of the scanning circuits can be performed leftward or rightward.

Therefore, it would have been obvious to one skilled in the art to utilize the driving circuits as taught by Asada in combination with the driving circuit as taught by Koyama et al. in order to achieve a high speed bi-directional scanning circuit (col. 3, lines 16-18).

In regard to claim 15, as cited above, Koyama et al. data items are digital video signals corresponding to adjacent regions of the display unit.

Referring to claims 17-18, as applied to claim 13 above, Koyama et al. and Asada teach all the limitations of claims 17-18, except that the numbers n and k are any of 512, 400, 320, and 256, and the number of memory portions is equal to the product of the number of regions divided in a horizontal direction and the number of primary colors. However, as cited above, Koyama et al. teach the numbers of pixels can be arbitrarily assigned, therefore, it would have been an obvious matter of design choice to modify the size of the line memory and the order of the output-side memory as taught by Koyama et al. corresponding to 400 pixels or 512 pixels, starting the data items from the 400th, 320th, and 256th, and modify the number of memory portions since applicant has not disclosed that having the size of line memory corresponding to 400 or 512 pixels, or starting the data items from the 400th, 320th, and 256th, or the number of memory portions solves any stated problem or is for any particular purpose because the size of line memory will vary based on the amount of data being processed or displayed, and it appears that any memory size and any order of input data items would perform equally well.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D. C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

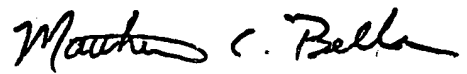
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Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose
telephone number is (703) 306-0377.

H. Nguyen

02/27/2004



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600